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Using ADF for Portlet Development in WCI via Ensemble

An Oracle Whitepaper

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Introduction

ADF is the most productive platform for building Web applications that interact with Oracle Applications or data. Oracle WebCenter Interaction (WCI) customers can consume ADF-based Web applications via Oracle WebCenter Ensemble. This document describes in detail how to consume an ADF-based Web application in WCI.

Summary

The following steps give a brief description of how to use an ADF-based Web application in WCI, via Ensemble. Each step is covered in detail in later sections.

1. Make sure you have installed the following: WebCenter Interaction 10.3, WebCenter Ensemble 10.3.0.1.0 and JDeveloper 11.1.1.1.0. If you plan on using WebCenter Services, make sure that the Oracle WebCenter Framework and Services Design Time 11.1.1.0.0 for JDeveloper is also installed.
2. Configure single sign-on between Ensemble and WCI. Instructions are included in a later section, but they are fully documented online here:
http://download.oracle.com/docs/cd/E13158_01/alui/Ensemble/docs103/WebCenter.103/e14114/proxyauthentication.htm-11077697
3. Create an ADF Web application and add taskflows to a page. Configure the web.xml of the ADF application. Run the application.
4. Register the ADF server as a Resource in Ensemble. Register the taskflow page as a Pagelet in Ensemble.
5. Configure the Ensemble aluiinjectorresource (the REST API).
6. In WCI, create a remote server for the Ensemble proxy. Create a Portlet Web Service for the Ensemble pagelet from Step 4. Create a portlet for the pagelet.
7. Add the portlet to a WCI page.

Ensemble | WCI SSO

From the online docs:

Integrating with the Oracle WebCenter Interaction Portal

This section provides details about configuring Oracle WebCenter Ensemble to automatically log users in to the Oracle WebCenter Interaction portal.

To integrate with the Oracle WebCenter Interaction portal:

1. Deploy the portal.war file, using an instance of Apache Tomcat.

Note:

Your version of Apache Tomcat must be prior to 5.5.25 for proper SSO integration between Oracle WebCenter Ensemble and Oracle WebCenter Interaction. This integration will fail if you use Apache Tomcat 5.5.25 or above.

The portal.war file is located in: `install_dir\ensembleproxy\version\integration\alisso\`
Deploy the portal.war file on the portal server. The location to which you deploy the portal.war file is the Portal Cookie Replication URL.

Note:

Although you can use various brands of Web servers to host the Oracle WebCenter Interaction portal, you must use Apache Tomcat to host the portal.war file.

2. Enable the Remember Me cookie features of Oracle WebCenter Interaction by performing the following:

Note:

Before performing these steps, determine the security impact that enabling Remember Me cookie features might have on your portal environment.

1. On the machine on which Oracle WebCenter Interaction is installed, navigate to `install_dir\settings\portal\portalconfig.xml`
2. Ensure that the AllowAutoConnect node is set to 1.
3. Restart Oracle WebCenter Interaction.
3. Navigate to Configuration Manager > Ensemble > SSO Login, and enable portal cookie replication. Additionally, configure the following settings:
 - o Portal Cookie Replication URL: The location to which you deployed the portal.war file in the previous step. Oracle WebCenter Ensemble redirects to this URL to verify that a portal cookie exists.
 - o Timeout: The frequency -- in milliseconds -- at which Oracle WebCenter Ensemble checks for portal cookies.
 - o Access Level: The access level that is assigned to the user when Oracle WebCenter Ensemble detects a valid portal session cookie. Valid values are between 1 and 10.
4. Navigate to Oracle WebCenter Configuration Manager > Ensemble > ALUI Security Login Tokens, and ensure that the following settings are correctly configured:
 0. The default token type should be set to ALUI.
 1. The message authentication code seed value should match the login token root value. You can find the login token root value in the ptserverconfig table of the Oracle WebCenter Interaction database.
5. Navigate to Oracle WebCenter Configuration Manager > Ensemble > ALUI Directory.
 0. Ensure that the authentication provider is set to ALUI.
 1. Ensure that all values for the Connection Information, Users, and Groups sections are correctly configured.

Deploy ADF Taskflows to a Page

Create a new ADF application in JDeveloper. Add out-of-the-box or custom taskflows to that page. Secure that application, if required, with a login form or with Basic Auth. Ensemble will use either of these methods to map credentials. WCI customers might also consider using ALUI Directory as the user store for the ADF application.

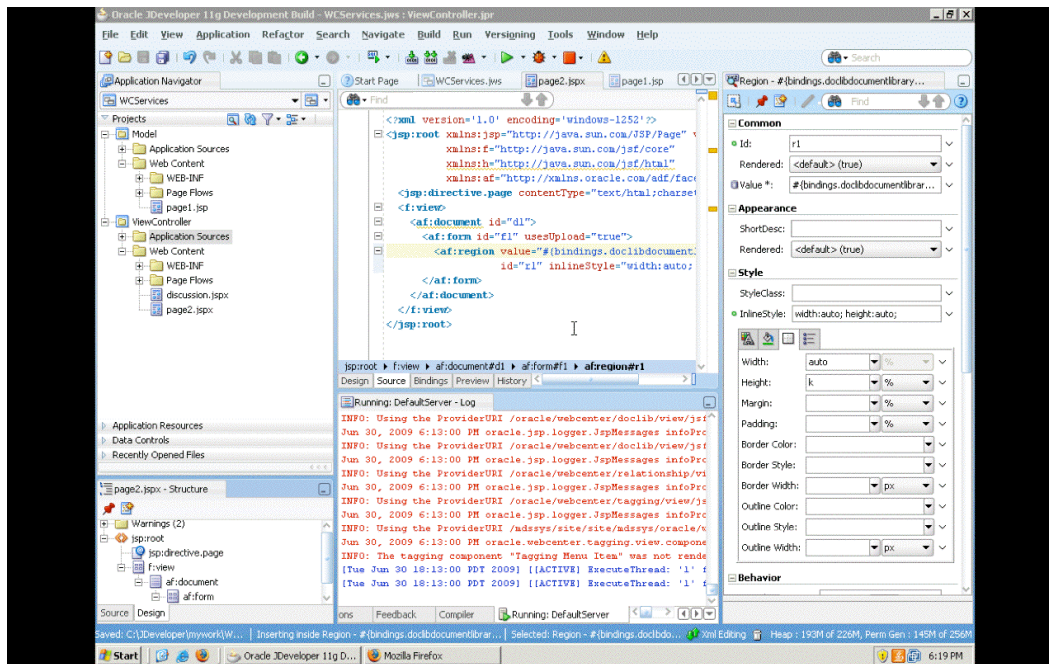


Figure 1 – An ADF page with a taskflow.

Make sure that the web.xml of the application has the following context parameter:

```
<context-param>
  <param-name>oracle.adf.view.rich.security.FRAME_BUSTING</param-name>
  <param-value>never</param-value>
</context-param>
```

Deploy the ADF application and make note of the URL of the page on which the taskflow is running.

Register an Ensemble Resource and Pagelet

The ADF server will be registered as an Ensemble *Resource*. The page on which the taskflow is running will be registered as an Ensemble *Pagelet*.

To register the resource, go to the Ensemble administration console, usually at a URL like `http://<ensemble_server>:20070/ensembleadminui`.

Under the Applications | Resources tab, click Create New. Name the resource and, under the Connections sub-tab, enter the hostname and port of the ADF server. The External URL prefix can be any name, but must be unique in Ensemble. This is the URL, relative to the Ensemble proxy, where the application will be running.

The screenshot shows the 'Connections' tab in the Ensemble configuration interface. It features a tabbed menu at the top with 'General', 'Connections', 'Credential Mapping', 'Headers', 'CSP', and 'Roles'. The 'Connections' tab is active. Below the tabs, there are two main sections:

- Internal URL prefix:** A text input field containing 'http://10.221.51.197:7101/'.
- External URL prefixes:** A section with a 'URL' header and a table. The table has one row with a checkbox (unchecked) and the text '/webcenter/'.

 At the bottom of the form, there is a checkbox labeled 'Enable URL Rewriting' which is checked.

Figure 2 – An ADF server connection in Ensemble.

Under the Applications | Pagelets tab, click Create New. Name the pagelet and select the ADF server as the parent resource. “Library” is a mandatory grouping name for pagelets. Under the Location sub-tab, enter the URL suffix that completes the URL to the page on which the taskflow is running.

The screenshot shows the 'Location' tab in the Ensemble configuration interface. It features a tabbed menu at the top with 'General', 'Location', 'Parameters', 'Metadata', and 'Consumers'. The 'Location' tab is active. Below the tabs, there are three main sections:

- Internal URL prefix:** A text input field containing 'http://10.221.51.197:7101/'.
- URL suffix:** A text input field containing 'WCservices-ViewController-context-root/faces/page2.jspx'.
- Clip:** A radio button selection with 'Clip nothing. Return all content.' selected.

Figure 3 – The location of a pagelet that refers to an ADF page.

Ensemble “aluiinjectorresource”

WCI will use an Ensemble REST API to retrieve portlet content. The REST API runs as an intrinsic resource in Ensemble and is named “aluiinjectorresource”. This resource must either be anonymous, or must accept the WCI “Portal Login Token” as a valid form of authentication. In the Policies Tab, find the aluiinjectorresource and go to the “Authentication Level” sub-tab. Make sure that the Minimum Credential Level is zero (i.e. anonymous) or that the “Allow Portal Login Token” checkbox is checked. Remember, these settings control access to the REST API

itself, not to the pagelet content. You can require authentication for pagelets even if the REST API is publicly accessible.

The screenshot shows a configuration interface with three tabs: 'General', 'Policies', and 'Authentication Level'. The 'Authentication Level' tab is active. Below the tabs, there are two settings: 'Minimum credential level' with a dropdown menu set to '1', and 'Allow Portal Login Token' with a checked checkbox.

Required fields are marked with an asterisk

Figure 4 – A resource configured to accept the WCI login token as a valid means of auth.

WCI Configuration

In WCI, create a remote server that points to the Ensemble proxy.

The screenshot shows a configuration panel titled 'Remote Server Properties'. It contains two main sections: 'Base URL:' with a text input field containing 'http://ensemble.us.oracle.com/', and 'Base Authentication Type:' with a radio button selected for 'None'.

Figure 5 – Ensemble remote server.

In WCI, create a Portlet Web Service that points to the REST API for the ADF pagelet. A typical form of this call will be:

```
/inject/v2/portlet/<pagelet_library>/<pagelet_name>/?csapi=true&content-type=iframe
```

The API documentation is included in Appendix A for convenience. It is fully documented online here:

http://download.oracle.com/docs/cd/E13158_01/alui/Ensemble/docs103/WebCenter.103/e14115/restapis.htm - CHDFGJFD

HTTP Settings

Portlet URL:
 http://ensemble.us.oracle.com/ inject/v2/portlet/webcenter-services/doclib?cont

Portlet Timeout: 5 Second(s)

Gateway Timeout: 20 Second(s)

Figure 6 – A Portlet Web Service pointing to the Ensemble REST API.

Important Notes:

- For WCI only, the API uses inject/v2/**portlet**, not inject/v2/pagelet. “pagelet” is used in all other cases like, for example, injection into iGoogle.
- ADF-based pages must be injected into WCI using iFrames.

If the aluiinjectorresource is expecting a portal login token, make sure to send that token.

Settings

Send Community ACL to Portlets

Send Page ID to Portlets

Send timezone to Portlets

Send Login token to Portlets

Login Token duration (In minutes): 5

Figure 7 – A Portlet Web Service configured to send the WCI Login Token.

Finally, create a portlet based on this Web service and add it to a page. View that page either as the Ensemble user who created the pagelet or as a user who, according to an Ensemble Access Policy, can see the pagelet. More info on Ensemble Policies can be found here:

http://download.oracle.com/docs/cd/E13158_01/alui/ensemble/docs103/webcenter.103/e14114/policies.htm - i1077719

Credential Mapping

Currently, there is no native identity propagation between WCI or Ensemble and WebCenter, unless OAM is being used in all places. In order to propagate identity between Ensemble and the ADF-based application, you must first protect the application with a login form or Basic Auth. Then, configure the appropriate credential mapper in Ensemble in the definition of the ADF resource (i.e. Applications | Resources | Credential Mapping tab of ADF server). More information on Ensemble credential mapping can be found here:

http://download.oracle.com/docs/cd/E13158_01/alui/ensemble/docs103/webcenter.103/e14114/autologin.htm - i1076955

Appendix A: REST API Documentation

From the online docs:

Pagelet Inject API

By entering a proxy URL into the portal portlet source code, Oracle WebCenter Ensemble will load up the pagelet as a portlet. The proxy URL must use the following format:

`http://host:port/inject/v2/pagelet/libraryname/pageletname?instanceid=55&content-type=html`

where libraryname and pageletname refer to the library and pagelet configured in Oracle WebCenter Ensemble.

Note:

When using the pagelet inject API as the URL for a Portlet Web Service in Oracle WebCenter Interaction, you must switch "pagelet" to "portlet" in the URL. For example, the above URL would become:

`http://host:port/inject/v2/portlet/libraryname/pageletname?instanceid=55&content-type=html`

The query string arguments to the above call define how the pagelet is to be returned. The following parameters are defined:

- instanceid: Optional. The instance ID of the pagelet.
- content-type: The return type. Three types are supported:
 - javascript: Returns injectable code.
 - html: Returns the pagelet markup with its associated PTPortlet object.
 - iframe: Returns an IFrame that points back to the inject api, filling the IFrame with the pagelet content, instead of directly inline with the page. The IFrame can be styled by providing a set of query string parameters.

Parameter	Description	Default
ifwidth	Sets the width of the IFrame; can be specified in percent '%' or pixels 'px', for example: ifwidth=500px. Can be set to 'auto' to automatically resize the IFrame to fit the content within.	100%

Parameter	Description	Default
ifheight	Sets the height of the IFrame; can be specified in percent '%' or pixels 'px', for example: ifheight=500px. Can be set to 'auto' to automatically resize the IFrame to fit the content within.	No default
ifborder	Sets the border of the IFrame.	'none'
ifalign	Sets the align rule within the IFrame, for example: ifalign=center.	No default
ifdesc	Sets the description of the IFrame.	No default
ifmarginheight	Sets the margin height; can be specified in percent '%' or pixels 'px', for example: ifmarginheight=500px.	No default
ifmarginwidth	Sets the margin width; can be specified in percent '%' or pixels 'px', for example: ifmarginwidth=500px.	No default
ifscrolling	Sets the scrollbars of the IFrame. Accepted values: yes/no/auto.	auto
ifstyle	Sets the CSS style of the IFrame	No default
ifclass	Sets the CSS class of the IFrame.	No default

- csapi: Sets whether the CSAPI will be included with the pagelet response (true or false). Including the CSAPI is optional, but the pagelet included in the response relies on the CSAPI libraries being present on the page where the pagelet is to be rendered. If csapi=false, then the CSAPI libraries must be included with the parent page (usually in the HEAD section).
- onhttperror:: When a pagelet request results in a 403, 404 or any other error code, Oracle WebCenter Ensemble can forward the error code and the error page itself to the browser for display to the user. The onhttperror parameter accepts the following values:
 - comment (default): Oracle WebCenter Ensemble will create an HTML comment in place of the failing pagelet (the failing pagelet will simply not be displayed).
 - inline: The pagelet error along with the server error page will be displayed inline where the pagelet would normally be shown on the page.
 - fullpage: The http error will consume the whole page. This mode is only available if Oracle WebCenter Ensemble controls the parent page.



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